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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,082	03/06/2002	Michael E. Cotto	006-241-300	8490

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DALY, CROWLEY & MOFFORD, LLP
SUITE 101
275 TURNPIKE STREET
CANTON, MA 02021-2310

EXAMINER

ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 04/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/092,082	Applicant(s) COTTO, MICHAEL E.	
	Examiner Raymond W. Addie	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Prior Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13,14 and 16-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13,14 and 16-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to because of the following informalities:

claim 13, Ins. 9-10 recite "tines include a truncated end surface forming an angle with the handle ranging from about plus ten degrees to negative ten degrees"; should be - -tines include a truncated end surface that is within plus to minus ten degrees from being parallel with the longitudinal axis of the handle. Since the truncated surface of the disclosed plurality of tines, does not actually form an angle with the longitudinal axis .

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "angle between the handle and the truncated end surface of the tines ranging from about plus ten degrees to negative ten degrees" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 16-20, 22, 24-31, 33, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millbury # 6,131,381 in view of Reithel # 5,775,080.

Millbury discloses a rake (100) having a handle (120), an elongate, cylindrical rake head (145), a holder (150), a plurality of tines (170) having tips (176) that are tapered forming an acute angle (G), thus aligning or nearly aligning the flattened portion of the tine tips (176), with the longitudinal axis of the handle (120). Although Millbury discloses the angle (A) forms any desirable angle with the handle (120), based upon the most efficient and productive raking action that can be accomplished with the rake (100); Millbury does not explicitly recite the use of an acute angle (A). See col. 11, Ins. 19-35; 19, Ins. 1- col. 20, ln. 15.

However, Reithel teaches a grading rake (10), comprising;

a handle (18), a holder (44) secured to the handle;

an elongate rake head (48) secured to the handle by the holder (44).

A plurality of tines (22) extending from the rake head for grading

particulate matter (16).

Wherein an angle between the plurality of tines (22) and the handle (18) may be approximately 60 degrees. See Col. 3.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the grading rake of Millbury, with tines forming an acute angle with the handle, as taught by Reithel, in order to provide the most efficient raking action possible.

In regards to claims 14, 18-20, 31 Millbury discloses a rake having an elongate rake head (145) that is substantially cylindrical and a holder (150) includes an arcuate curve, complementing a surface of the elongate rake head, and at least one fastener (132), for connecting the rake head (145) to the holder (150), that resists bending loads. Wherein the rake head may contain a plurality of holes (164) for receiving respective tines. See Millbury col. 11, Ins. 49-67.

In regards to Claims 16, 17, 29, 30 Millbury discloses a rake (100) having a plurality of tines (170) having tips (176) that are tapered forming an acute angle (G), such that the truncated surfaces form an acute angle with the longitudinal axis of the tines (170), in order to provide a pushing action to the rakes' use, which is an essential task of grading particulate matter. See col. 19, Ins. 1- col. 20, In. 15.

In regards to claims 22, 24, 25, 27, 33, 34 Millbury discloses the tines are substantially cylindrical, are spaced about 7/8" apart and are made of a stiff but flexible polymer. See col. 11, In. 19-col. 12, In. 67.

Although Millbury does not disclose to what extent the reinforced thermoplastic tines 9170) will flex, without breaking, Millbury clearly illustrates in Figs. 14a, 14b, 15a, 15b the tines (170) are clearly intended to flex, without breaking, and further discloses "assisted by the flexible resilience of the material composing tine (170) thereby minimizing stresses" developed in the tines. In col. 17, Ins. 60-62. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake of Millbury in view of Reithel, with tines that can flex without breaking, as taught by Millbury, in order to minimize stresses developed in the rake tines, as reasonably suggested by Millbury.

4. Claims 21, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millbury '381 in view of Reithel '080 as applied to claims 19, 28 above, and further in view of Fuller # 1,577,065.

Millbury in view of Reithel disclose a grading rake having a plurality of tines secured to an elongate cylindrical head; but do not disclose a plurality of fasteners for securing the tines to the rake head. However, Fuller '065 discloses a lawn tool having a plurality of tines (13) removably secured to a cylindrical rake head (10/11) by a plurality of removable fasteners (12). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake of Millbury in view of Reithel with a plurality of

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removable fasteners, as taught by Fuller '065, in order to facilitate replacing broken or worn tines. See Fuller, Figs 1, 5.

5. Claims 23, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millbury '381 in view of Reithel '080 as applied to claims 19, 28 above, and further in view of Judy # 4,270,614.

Millbury in view of Reithel disclose a grading rake having metal or plastic tines, that have a diameter of at least 3/16" dependent upon the material of the tine.

However, Judy teaches it is common to provide stone rakes with tines (46) having a diameter between 3/16"-1/2" in diameter in order to remove small stones, sticks that would other-wise interfere with a finished landscape.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake device of Millbury in view of Reithel, with at least 1/4"-1/2" diameter tines, as taught by Judy, in order to provide the necessary raking action desired; as reasonably suggested by Millbury and Judy. See col. 5, Ins. 35-65 of Judy; Millbury col. 12, ln. 46-col. 13, ln. 9.

6. Claims 26, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millbury in view of Reithel as applied to claim 25 above, and further in view of Guidarelli 5,142,855.

Millbury in view of Reithel disclose a rake having metal or thermoplastic tines, but

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do not disclose the use of nylon tines. However, Guidarelli # 5,142,855 teaches it is desirable to make rake tines (26) from metal or Nylon. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake device of Russo from Nylon or metal, as taught by Guidarelli, since Guidarelli, teaches two materials are equivalent. See col. 1 , lns. 61-67.

In regards to claim 37 Millbury discloses a method of grading particulate matter comprising:

Pushing particulate matter with a rake;

Pulling the particulate matter with the rake such that cylindrical tines extending from a rake head flex a free end such that the tines separate relatively large particles from smaller particles, wherein a truncated end surface of the tines travels across a surface of the particulate matter.

What Millbury does not disclose is the angle formed between the tines and the handle. However, Reithel teaches a grading rake wherein the tines form an angle of about 60 degrees, with a handle of the rake. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the rake of Millbury, with tines disposed at an acute angle, as taught by Reithel, in order to provide the most efficient raking action possible.

Although Millbury in view of Reithel disclose the tines could be metal or any of a variety of plastic materials, Millbury in view of Reithel do not disclose is the use of

nylon tines. However, Guidarelli teaches it is desirable to make rake tines (26) from metal or Nylon. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake of Millbury in view of Reithel from Nylon, as taught by Guidarelli, since Guidarelli, teaches the materials are equivalent for use with rakes. See col. 1 , Ins. 61-67.

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Millbury in view of Reithel and Judy '614 as applied to claim 35 above, and further in view of Guidarelli '855.

Millbury in view of Reithel and Judy discloses a rake having 3/16"-1/2" tines made from metal or a variety of plastic materials, but does not explicitly recite the use of nylon tines. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake of Millbury in view of Reithel from Nylon, as taught by Guidarelli, since Guidarelli, teaches the materials are equivalent for use with rakes. See col. 1 , Ins. 61-67.

Response to Arguments

8. Applicant's arguments, see paper filed 2/17/2004, with respect to the rejection(s) of claim(s) 13-37 under 35 U.S.C. 102(b) or in the alternative 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Millbury and Reithel.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 703 305-0135. The examiner can normally be reached on 8-2, 6-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703 308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Raymond Addie
Patent Examiner
Group 3600**

4/26/2004